

WHAT IS CLAIMED IS:

1. A service manager for processing multimedia calls in a packet-based network, said service manager comprising:

5 a protocol specific processor adapted for coupling to external sources; and  
a common call processor coupled to the protocol specific processor and comprising:

a feature layer for providing feature functionality;

a connection view processor and a basic call state model (BCSM)

10 processor for handling basic call processing functions; and

a multimedia view processor for connection management.

2. The service manager in accordance with claim 1 wherein the connection view processor further comprises a database for storing connection view object attributes and a connection view service logic processor.

15 3. The service manager in accordance with claim 1 wherein the multimedia view processor comprises a database for storing multimedia view object attributes and a multi-media view service logic processor.

4. The service manager in accordance with claim 1 wherein the basic call state model processor generates messages to create, modify, and delete multimedia view objects.

20 5. The service manager element in accordance with claim 4 wherein the basic call state model processor is an AIN basic call state model processor.

6. The service manager element in accordance with claim 4 wherein the basic call state model processor is an ITU-T IN basic call state model processor.

25 7. A method for processing multimedia calls in at least one service manager wherein the at least one service manager comprises a BCSM processor for executing originating and terminating call models and a means for connection management, the method comprising the steps of:

30 in response to a call setup request from an originating party, invoking originating BCSM processing in the BCSM processor of the service manager associated with the originating party;

generating a first message in the BCSM processor of the service manager associated with the originating party to create a multimedia view object associated with the originating party and communicating the first message to the means for connection management of the service manager associated with the originating party;

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invoking terminating BCSM processing in the BCSM processor of the service manager associated with a terminating party;

generating a second message in the BCSM processor of the service manager associated with the terminating party to create a multimedia view object associated with the terminating party and communicating the second message to the means for connection management of the service manager associated with the terminating party;

in response to an update to media streams initiated by the terminating party, generating a third message in the BCSM processor of the service manager associated with the terminating party to modify the multimedia view object associated with the terminating party and communicating the third message to the means for connection management of the service manager associated with the terminating party;

in response to an update to media streams initiated by the originating party, generating a fourth message in the BCSM processor of the service manager associated with the originating party to modify the multimedia view object associated with the originating party and communicating the fourth message to the means for connection management of the service manager associated with the originating party;

in response to a release of the call, generating a fifth message in the BCSM processor of the service manager associated with a party initiating the release to delete the multimedia view object associated with the initiating party and communicating the fifth message to the means for connection management of the service manager associated with the initiating party; and

in response to a release of the call, generating a sixth message in the BCSM processor of the service manager associated with a non-initiating party to delete the multimedia view object associated with the non-initiating party and communicating the sixth message to the means for connection management of the service manager associated with the non-initiating party.

8. The method in accordance with claim 7 wherein the service manager associated with the originating party and the service manager associated with the terminating party are the same service manager.

9. The method in accordance with claim 7 wherein a first service manager is associated with the originating party and a second service manager is associated with the terminating party.

10. The method in accordance with claim 7 wherein the multimedia view object comprises multimedia view attributes and multimedia view service logic.

11. The method in accordance with claim 7 wherein the update contained in the third message to media streams initiated by the terminating party comprises  
5 information provided by the terminating party during a point in terminating BCSM processing where the call is presented to the terminating party.

12. The method in accordance with claim 7 wherein the update contained in the third message to media streams initiated by the terminating party comprises information provided by the terminating party when accepting the session.

10 13. The method in accordance with claim 7 wherein the update contained in the fourth message to media streams initiated by the originating party comprises information provided to the BCSM processor executing the originating basic call state model from the BCSM processor executing the terminating BCSM in an alerting message.

15 14. The method in accordance with claim 7 wherein the update contained in the fourth message to media streams initiated by the originating party comprises information provided to the BCSM processor executing the originating BCSM from the BCSM processor executing the terminating BCSM in an answer message.

20 15. The method in accordance with claim 7 wherein the update contained in the fourth message to media streams initiated by the originating party comprises information provided by the originating party in an acknowledgement message during an active point in call.

25 16. The method in accordance with claim 7 wherein the update contained in the third message to media streams initiated by the terminating party comprises information provided by the originating BCSM in an acknowledgement message during an active point in call.

17. The method in accordance with claim 7 wherein a multimedia view processor in the means for connection management filters the information contained in updates to media streams associated with the originating and terminating parties.

30 18. The method in accordance with claim 17 wherein the multimedia view processor in the means for connection management generates information to update media streams associated with originating and terminating parties.

35 19. The method in accordance with claim 18 wherein the multimedia view processor in the means for connection management communicates a rejection to an update request.

20. The method in accordance with claim 7 wherein each BCSM processor is an AIN BCSM processor.

21. The method in accordance with claim 7 wherein each BCSM processor is an ITU-T BCSM processor.

22. The method in accordance with claim 7 wherein the call setup request from the originating party uses H.225 protocol.

23. The method in accordance with claim 7 wherein the call setup request from the originating party uses SIP protocol.

24. A method for processing modifications to media streams of a stable multimedia call during the active point in call of the originating and terminating basic call state model in the at least one service manager wherein at least one service manager comprises a BCSM processor and a means for connection management, the method comprising the steps of:

in response to a modification request communicated by a protocol specific processor of the service manager associated with an initiating party, performing in the BCSM processor of the service manager associated with the initiating party the steps of:

generating a first message to modify the multimedia view object associated with the initiating party and communicating the first message to the means for connection management of the service manager associated with the initiating party; and

generating a second message containing the proposed modifications and communicating the second message to the BCSM processor of the service manager associated with a non-initiating party;

in response to the proposed modifications communicated by the BCSM processor of the service manager associated with the initiating party, performing in the BCSM processor of the service manager associated with the non-initiating party the steps of:

generating a third message to modify the multimedia view object associated with the non-initiating party and communicating the third message to the means for connection management of the service manager associated with the non-initiating party;

generating a fourth message containing the proposed modifications and communicating the fourth message to a protocol specific processor associated with the non-initiating party; and

in response to a reply to the proposed modification communicated by the protocol specific processor associated with the non-initiating party, performing in the BCSM processor of the service manager associated with the non-initiating party the steps of:

5           generating a fifth message to modify the multimedia view object associated with the non-initiating party and communicating the fifth message to the means for connection management of the service manager associated with the non-initiating party; and

10           generating a sixth message containing the reply to the proposed modification and communicating the sixth message to the BCSM processor of the service manager associated with the initiating party;

15           in response to the reply to the proposed modifications communicated by the BCSM processor of the service manager associated with the non-initiating party, performing in the BCSM processor of the service manager associated with the initiating party the steps of:

20           generating a seventh message to modify the multimedia view object associated with the initiating party and communicating the seventh message to the means for connection management of the service manager associated with the initiating party;

25           generating an eighth message containing the reply to the proposed modifications and communicating the eighth message to a protocol specific processor of the service manager associated with the initiating party;

30           in response to a reply generated by the protocol specific processor of the service manager associated with the initiating party, generating an ninth message to modify the multimedia view object associated with the initiating party and communicating the ninth message to the means for connection management of the service manager associated with the initiating party; and

35           generating a tenth message containing an acknowledgement of the agreed upon modifications and communicating the tenth message to the BCSM processor of the service manager associated with the non-initiating party; and

          in response to the message containing an acknowledgement of the agreed upon modifications, generating an eleventh message in the BCSM processor of the service manager associated with the non-initiating party to modify the multimedia view object associated with the non-initiating party and communicating the eleventh message to the means for connection management associated with the non-initiating party.

25. The method in accordance with claim 24 wherein the service manager associated with the initiating party and the service manager associated with the non-initiating party are the same service manager.

5 26. The method in accordance with claim 24 wherein a first service manager is associated with the initiating party and a second service manager is associated with the non-initiating party.

27. The method in accordance with claim 24 wherein a multimedia view processor in the means for connection management filters the information contained in updates to media streams associated with the originating and terminating parties.

10 28. The method in accordance with claim 27 wherein the multimedia view processor in the means for connection management generates information to update media streams associated with originating and terminating parties.

29. The method in accordance with claim 28 wherein the multimedia view processor in the means for connection management communicates a rejection to an  
15 update request.

30. A method for processing modifications to the media streams of a stable multimedia calls through connection control signaling, bearer-control signaling, or extraction of information from call signaling messages in at least one service manager wherein each service manager comprises a protocol specific processor and  
20 a means for connection management:

in response to a modification request related to media streams associated with the party initiating the modification, performing in a protocol specific processor of a service manager associated with the initiating party the steps of:

generating a first message to modify the multimedia view object associated  
25 with the initiating party and communicating the first message to the means for connection management of the service manager associated with the initiating party;  
and

generating a second message containing the proposed modifications to the media streams and communicating the second message to the protocol specific  
30 processor of the service manager associated with the non-initiating party via the means for connection management;

in response to a modification request related to media streams associated with the non-initiating party, performing in a protocol specific processor of the service manager associated with the non-initiating party the steps of:

35 generating a third message containing a response to the proposed modification to the media streams and communicating the third message to the

protocol specific processor of the service manager associated with the initiating party via the means for connection management; and

generating a fourth message to modify the multimedia view object associated with the non-initiating party and communicating the fourth message to the means for connection management of the service manager associated with the non-initiating party; and

in response to the message from the protocol specific processor of the service manager associated with the non-initiating party containing the response to the proposed modification, generating a fifth message in the protocol specific processor of the service manager associated with the initiating party to modify the multimedia view object associated with the initiating party and communicating the fifth message to the means for connection management of the service manager associated with the initiating party.

31. The method in accordance with claim 30 wherein the service manager associated with the initiating party and the service manager associated with the non-initiating party are the same service manager.

32. The method in accordance with claim 30 wherein a first service manager is associated with the initiating party and a second service manager is associated with the non-initiating party.

33. The method in accordance with claim 30 wherein the initiating party is an originating party of the multimedia call.

34. The method in accordance with claim 30 wherein the initiating party is a terminating party of the multimedia call.

35. The method in accordance with claim 30 wherein a multimedia view processor in the means for connection management filters the information contained in updates to media streams associated with the originating and terminating parties.

36. The method in accordance with claim 35 wherein the multimedia view processor in the means for connection management generates information to update media streams associated with originating and terminating parties.

37. The method in accordance with claim 36 wherein the multimedia view processor in the means for connection management communicates a rejection to an update request.